

Appln. No. 10/621,149

Docket No. P1909US00

Amendments to the Drawings

The attached new sheets of drawings includes new Figs. 5 and 6.
These sheets, which include Figs. 5 and 6, are new

Attachment: Two New Sheets of drawings

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REMARKS

Reconsideration is respectfully requested.

Entry of the above amendments is courteously requested in order to place all claims in this application in allowable condition and/or to place the non-allowed claims in better condition for consideration on appeal.

Claims 1, 4, 5, 9, 11 through 14, 16, 17, 19, 30 through 33 and 35 through 37 remain in this application. Claims 2, 3, 6, 7, 8, 10, 15, 18, 20 through 29, and 34 have been cancelled. No claims have been withdrawn or added.

The Examiner's rejections will be considered in the order of their occurrence in the Office Action.

Paragraphs 1 through 2 of the Office Action

The drawings have been objected to.

Submitted under separate cover and addressed to the Examiner is applicant's proposed amendment of the drawing. Specifically, claim 32 "dual write command is hard drive firmware command and claim 37, "additionally comprising providing a reserve area on the storage device that is not accessible by the operating system" have been depicted in new Figures 5 and 6.

An amendment of the "Brief Description of the Drawings" has been made in the specification to correspond to the amendment of the drawings.

In light of the proposed drawing amendment, it is therefore submitted that the objection to the drawings as originally filed has been overcome, and withdrawal of the objection to the drawings is respectfully requested.

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Paragraphs 3 through 11 of the Office Action

Claim 30 has been rejected under 35 U.S.C. §102(b) as being anticipated by Paterson.

Claim 31 has been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Paterson and further in view of Cheston.

Claim 32 has been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Paterson and further in view of Assaf.

As previously noted, claims 30 and 31, each require, in part, that "the information *to be read* contains a header designating a dual write operation" (emphasis added). Thus, the information as read from the previous location may be tagged or otherwise identified in the header of the recorded information as being information that should be the subject of the dual write operation. In this way, some information may be the subject to the dual write operation while other information may not be the subject of the dual write operation, and whether the information is subjected to the operation is marked on the information without reference to other files or sources or rules external to the information.

In the paragraph 10 of the rejection, which appears to be a response to the remarks made in the previous response, it is contended that:

The examiner disagreed with the applicant's argument. Paterson teaches a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20) and wherein the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, cl. 140; col. 11, line 60 to col. 12, line 20).

In further discussion, Peterson, fig. 12, cl. 140; col. 11, line 60 to col. 12, line 20, teaches a dual write command (i.e., a command causing write information to two locations or two writes) is an information to be read to identify as a read or write request wherein the write request is a dual write operation; and teaches a data segment is the information to be read. In addition, the cited portions teaches the dual write command is a head control information or a header of the information to be read. Thus, Paterson teaches "dual write operation" is designated by a header of the information to be read as

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required by claim 30 and a dual write command is contained in a header of the information to be read.

However, it is submitted that Figure 12 of the Paterson patent, and especially blocks 140 and 142 of Figure 12, support the contention that the "the information to be read" does not "contain[] *a header designating a dual write operation*". More specifically, Figure 12 of Paterson shows a block 140 that states "HOST ISSUES COMMAND TO WRITE DATA SEGMENT" and a separate and distinct block 142 that states "TRANSFER DATA SEGMENT FROM HOST TO DATA BUFFER". It is submitted that one of ordinary skill in the art, considering this portion of the Paterson patent relied upon in the rejection, would recognize the separateness of these steps, and this would lead one of ordinary skill in the art to believe that the header with the write command is not a part of the data transfer. It is therefore submitted that one of ordinary skill in the art would not recognize that "the information *to be read* contains *a header designating a dual write operation*" in Paterson.

It is further alleged in the rejection of claim 30 that:

wherein the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, el: 140; col. 11, line 60 to col. 12, line 20);

Looking to the cited portion of the Paterson patent, it states (emphasis added):

Referring to the flowchart in FIG. 12, the write process is initiated by the host 58 issuing a write command for writing the data segment 72 on the disk 22 (step 140). The processor 82 transfers the data segment 72 from the host 58 to the data buffer 80 (step 142). The processor 82 then proceeds to write data from the data buffer 80 to the disk 22 as follows. The identifier 74 of the data segment 72 in the data buffer 80 is utilized to obtain the addresses of two disk sectors corresponding to the data segment 72 where the data segment 72 can be stored (step 144). The disk sector addresses can be obtained as described above. The processor 82 then directs the VCM driver 54 to position the transducer 28 to transfer the data segment 72 from the data buffer 80 to one of said two disk sectors (step 146). The processor 82 also replicates the data segment 72 and generates a duplicate copy of the data segment 72 in the data buffer 80 (step 148).

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The processor 82 directs the VCM driver 54 to position the transducer 28 to write the duplicate copy of the data segment 72 from the data buffer 80 to the other of said two disk sectors (step 150).

Alternatively, the processor 82 can skip step 148, and instead of creating a duplicate copy of the data segment 72 within the data buffer 80, the processor 82 can write the same copy of the data segment 72 from the data buffer 80 to one of the two disk sectors first in step 146, and then to another of the two disk sectors next in step 150.

As emphasized, in the quote above, the discussion in Paterson states that the host issues a write command (it is unclear whether this write command initiates the writing of the data to both sectors), but there is no indication that any "dual write operation" is designated by a header of the information to be read" as required by claim 30. What causes the host to issue the write command (again, assuming that the write command issued by the host even causes the writing to two sectors) is not discussed by Paterson, and thus is not disclosed by Paterson, but it is clear that there is no disclosure that a dual write command is contained in a header of the information to be read. The box 140 of Figure 12 does not disclose anything more than the description at the cited portion.

It is therefore submitted that the Paterson patent does not anticipate the requirements of claim 30.

With respect to claim 32, which requires in part that "wherein the dual write command is a hard drive firmware command", it is alleged that the Assaf patent at col. 3, lines 15 through 20 and col. 5, lines 20 through 30 disclose this requirement. Looking to the Assaf patent, the portion at col. 3 states that:

A memory 24 and an input/output controller 25 are attached to the data and instruction bus 23. Attached to the input/output controller 25 is a floppy drive 26, a communications port 28 and a disk drive 30. The disk drive 30 shown is a hard or rigid disk drive. The rigid disk drive includes a housing 32 which typically includes a base plate and a cover which form a controlled environment called a disk enclosure.

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And the portion at col. 5 of Assaf states:

Once the disk drive has achieved rotational speed, the drive gets the drive parameters that are stored in the negative cylinders or the reserve area, as depicted by box 68. An additional sum, called a checksum, is calculated and stored with the original disk drive parameters. Upon reading the original parameters, the checksum is then recalculated and compared to the original checksum. If the checksum is valid, as depicted by decision box 70, the drive parameters are passed onto the drive firmware as depicted by box 72. Once the drive parameters are passed onto the drive firmware, the drive is ready to accept additional commands as shown in step 74 of the flow chart. Firmware is that part of software that usually cannot be easily changed. Firmware consists of microprograms that are contained in ROM. Firmware tends to be for specific hardware and offers software-type implementation techniques for that hardware. Firmware is generally limited to moving data through the data paths and functional units already present; and is able to effectively process only the instruction formats, data types, and arithmetic modes that are defined for the specific hardware for which it is written.

However, the cited portions of the Assaf patent are submitted to fail to teach or suggest this requirement of claim 31. More specifically, the first cited portion generally describes parts of a disk drive, and the second cited portion of Assaf patent merely describes various aspects of the operation and firmware of a disk drive. Nothing here discloses, or suggests, that a dual write command can or should be implemented as a command in the firmware of a hard drive. Simply because the disk drive has firmware, and the firmware controls data movement does not disclose or suggest that a dual write command is actually incorporated in that firmware. For these reasons, it is submitted the allegedly obvious combination would not disclose the requirements of claim 31.

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of Paterson, Cheston, and Assaf set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claims 30 through 33 and 35 through 37.

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Withdrawal of the §102(b) and §103(a) rejections of claims 30 through 32 is therefore respectfully requested.

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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